Appendix B

Summary of Best Management Practices (BMPs), Mitigation Guidelines and Standard Operating Procedures (SOPs)

The publications referenced in this appendix are sources of Best Management Practices (BMPs). BMPs are measures that have been developed by agency, industry, scientific, and/or working groups as voluntary methods for reducing environmental impacts associated with certain classes of activity. The BLM typically uses these measures as guidelines or project design features during implementation planning at the activity and/or project-specific levels.

The list included in this appendix is not limiting, but references frequently used sources. As new publications are developed, the BLM may consider those BMPs. In addition, many BLM handbooks (such as BLM Manual 9113-Roads and 9213-Interagency Standards for Fire and Aviation Operation) also contain BMP-type measures for minimizing impacts. Note that additional details about Mitigation, Reclamation, and Soil Guidelines can be found in Appendix C (SD Mitigation Guidelines), Appendix D (SD Reclamation Guidelines) and in Appendix N (Soil Monitoring).

The use of the BMPs and guidelines described below are not mandatory across the planning area, since individual measures may not be appropriate for use in every situation. Within the limits of BLM's authority, specific BMPs or guidelines may be required as a condition of an authorization at the project level (implementation level) to address site-specific circumstances. The use of other BMPs and guidelines would be analyzed on a case-by-case basis during environmental review associated with projects on the BLM land. These case-by-case analyses should not tier to the BMP publication as a way to dismiss environmental impacts (i.e., the review must analyze and disclose the environmental considerations and effects associated with use of the BMP). BMPs and guidelines may be added, dropped, or modified through plan maintenance.

BMPs and guidelines are not a "one size fits all approach" that address all specific circumstances that may occur. On occasion, an individual practice or guideline in this appendix may not be identical to actions outlined in the alternatives. In cases where differences are noted, the action outlined in the alternative that is selected would take preference over the general practice or approach that is described in the BMPs and Guidelines section of the RMP. At the implementation level (project level) BMPs that are applied as a condition or requirement for a specific authorization would become mandatory when the authorization is approved.

The following Best Management Practices would be applied regardless of the alternative chosen:

- Air Resources
- Climate Change
- Fluid Minerals including Oil and Gas BMPs for Wildlife
- Rangeland Health Standards and Guidelines
- Wind Energy Development Programmatic EIS
- Montana/Dakota Guidelines for Grazing Management, Dakota's Portion
- Mitigation Guidelines (additional details can be found in Appendix C).
- South Dakota Field Office Reclamation Guidelines (additional details can be found in Appendix C).
- Interagency Burned Area Rehabilitation Guidebook
- Monitoring Guidelines for Soils
- South Dakota Non-Point Source Management Plan
- Forestry Best Management Practices for South Dakota
- Selected Practices for Avian Protection on Power Lines
- Guidelines for Open Burning
- Integrated Vegetation Management Handbook H-1740-2
- Interagency Standards for Fire And Fire Aviation Operations
- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States

- 2008-2012 Invasive Species National Management Plan
- South Dakota Aquatic Nuisance Species Management Plan
- Keep Aquatic Nuisance Species out of South Dakota Waters

In addition to the practices and measures described in this Appendix, the Mitigation Guidelines (Appendix C) provide a description of other measures to avoid or reduce adverse impacts.

Specific conservation actions and mitigation measures for sage-grouse management can be found in the mitigation section of the Chapter 2 summary and in Appendix V.

Air Resources BMPs

Developed by: Bureau of Land Management

Year developed or last updated: 2012

Impacts to air resources and air quality related values (AQRVs) can be reduced using the following BMPs:

A. Fugitive dust emissions can be reduced by:

1. using two-track primitive roads whenever possible rather than developing a dirt road;
2. applying water or chemical suppressants (e.g., magnesium chloride, calcium chloride, lignin, sulfonate, or asphalt emulsion) to non-primitive unpaved roads or surfacing non-primitive unpaved roads with gravel, chip-seal, or asphalt;
3. imposing vehicle speed limits on unpaved roads;
4. restricting the extent of surface impacts during construction activities and ongoing operations by using directional drilling to reduce the number of oil and gas well pads when feasible;
5. using dust abatement techniques before, during, and after surface clearing and excavation activities;
6. covering construction materials and stockpiled soils if they are a source of fugitive dust;
7. suspending construction activities during high winds;
8. adding gravel to non-reclaimed well pad areas;
9. revegetating areas when construction is complete;
10. locating linear facilities in the same or parallel trenches and constructing them at the same time; and
11. mowing rather than removing vegetation.

B. Fugitive dust and vehicle exhaust emissions related to oil and gas activity can be reduced by restricting vehicle trips by:

1. consolidating facilities by using directional drilling and multiwell oil and gas pads;
2. developing centralized liquid collection (water, produced water, and fracturing liquid) facilities and production (treatment and product storage) facilities to reduce the number and average distance of vehicle trips;
3. using shuttles or vanpools for employee commuting;
4. using automated equipment and remote telemetry; and
5. using solar power to add automated equipment in areas without access to electricity.

C. Non-vehicular engine exhaust emissions can be reduced by:

1. electrifying equipment when feasible;
2. achieving high levels of emission control by installing and operating low-emission equipment (i.e., drill rig engines with emissions at least as low as Tier 4 engine standards) or operating older equipment that has been retrofitted with additional emission controls such as nonselective catalytic reduction or catalytic oxidation;
3. using natural gas or electric engines rather than diesel engines;

4. using alternative energy (solar power, wind power, or both) to power new water source developments; and
5. converting power sources at existing water well developments to alternative energy sources.

D. Fugitive volatile organic compound (VOC), hazardous air pollutant (HAP), and/or methane (a greenhouse gas [GHG]) emissions from oil and gas activities can be reduced by the following BMPs when feasible:

1. using green completion technology to capture methane (and some VOC and HAP) emissions during completion and place the gas in sales pipelines;
2. using flaring rather than venting during completion activities, but only in cases where product capture is not feasible;
3. using closed tanks rather than open tanks or pits;
4. installing vapor recovery units on condensate, produced water, and oil storage tanks;
5. using vapor balancing during condensate and oil tanker truck loading;
6. using closed-loop drilling;
7. replacing pneumatic (natural gas) pumps with electric or solar pumps;
8. optimizing glycol circulation rates on glycol dehydrators;
9. replacing wet seals with dry seals in centrifugal compressors;
10. replacing worn rod packing in reciprocating compressors;
11. installing automated plunger lift systems in natural gas wells; and
12. monitoring equipment leaks and repairing equipment leaks.

E. Sulfur dioxide (SO2) emissions would be reduced by:

1. using ultra-low sulfur diesel fuel in diesel vehicle and stationary engines.

Climate Change BMPs

Impacts to climate change can be reduced using the following BMPs:

A. Reduce CO_2 emissions by reducing vehicle miles traveled and using fuel-efficient vehicles.
B. Reduce CO_2 emissions by using renewable energy to power equipment.
C. Reduce CO_2 emissions by using energy saving techniques.
D. Identify and implement methods to sequester CO_2.
E. Reduce methane emissions from oil and gas activities by:

1. capturing methane using green completion, when feasible, and beneficially using the gas by placing it in sales pipeline;
2. flaring methane during well completion activities for which green completion is infeasible;
3. replacing natural gas driven pneumatic equipment with solar or electrically powered equipment;
4. optimizing glycol recirculation rates for glycol dehydrators;
5. operating flash tank separators on glycol dehydrators; identifying fugitive emissions from equipment leaks and repairing or replacing seals, valves, compressor rod packing systems, and pneumatic devices; and
6. implementing additional GHG emission reduction strategies identified in the oil and gas BMPs located at EPA Natural Gas STAR Program, http://www.epa.gov/gasstar/tools/recommended.html

Fluid Minerals BMPs

Developed by: Bureau of Land Management

Publication reference: BLM/WO/ST-06/021+3071

Available from:
Online at: http://www.blm.gov/bmp/

Online at: http://www.mt.blm.gov/oilgas/operations/goldbook/goldbook1.html
Online at: http://www.mt.blm.gov/oilgas/operations/goldbook/Stand_Enviro_Color.pdf
Online at: http://www.mt.blm.gov/oilgas/operations/color.pdf

Description: BMPs for oil and gas demonstrate practical ideas which may eliminate or minimize adverse impacts from oil and gas development to public health and the environment, landowners, and natural resources; enhance the value of natural and landowner resources; and reduce conflict.

The publication reference is to the "Gold Book" which is formally titled "Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development." In addition, the first internet citation is to a location maintained by the Washington Office of the BLM containing general and technical information on the use and application of BMPs. The second location refers the reader directly to an online version of the "Gold Book." The third and fourth locations refer the reader to color charts for use in selecting paint colors for oil and gas facilities.

Oil and Gas BMPs for Wildlife

Developed by: *Bureau of Land Management*

Publication reference: Instruction Memorandum No. 2013-033

Available at:
http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2013/IM_2013-033.html

In 2012, the BLM developed BMPs for wildlife protection. Best practices established in the policy focus on the following five industry situations:

1. Open pits and tanks containing freestanding liquid;
2. Chemical tank secondary containment;
3. Pit, tank, and trench entrapment hazards;
4. Open exhaust stacks; and
5. Wire exclosure fencing.

All BLM field offices will ensure new fluid mineral permit approvals contain appropriate BMPs necessary for complying with existing Federal energy, wildlife, and environmental laws and regulations. The BLM has an established policy requiring the use of state-of-the-art environmental mitigation measures in all permits it approves. The BMPs identified in the new policy take into consideration unique wildlife needs and the potential hazards of extractive industry operations. Specific mitigation strategies include using closed loop systems or nets for managing fluids, constructing wildlife escape ramps in open excavation operations, and installing screens on all open exhaust stacks to prevent bird and bat entry or nesting.

Strategies are also included that reduce threats to important bird species like the Greater-Sage Grouse and Lesser Prairie-Chicken. For these species, demonstrably effective mitigation measures will utilize fence markings around production facility exclosures to prevent wire collisions near mating areas. Increased industry adoption of these best practices at field sites across BLM lands promises to yield healthier environments. BMPs for the fluid minerals industry are critical components in the BLM's larger effort to reduce the preventable causes of wildlife mortality across the country while also protecting human health and safety. Many of the BMPs also improve safeguards against groundwater contamination and emissions that may affect water and air quality for humans and wildlife alike. When identifying appropriate permit conditions for new projects, BLM field offices will incorporate the new BMPs through the existing National Environmental Policy Act (NEPA) environmental review process.

The new BMP policy follows a well-established BLM tradition of proactively protecting wildlife as part of the Bureau's multi-use mission facilitating both conservation and energy development. The implemented measures will help the agency and its oil and gas permittees remain in compliance with BLM regulations and Onshore Orders, the Fish and

Wildlife Service's enforcement of the Migratory Bird Treaty Act of 1918, as well as with all other Federal regulations dedicated to protecting wildlife on Federal lands.

Air Resource BMPs for Fluid Minerals

Developed by: Bureau of Land Management

Year developed or last updated: 2011 (May)

Description: This summary of various Air Resource BMPs outline common problems associated with fluid mineral production that can impact air quality and describes practices that reduce emissions. Examples of topics addressed include centralized water storage and delivery, centralizing of production, dust control, vehicle traffic, venting/ flaring, vapor recovery units, hatches, seals and valves. This summary also describes maintenance and monitoring practices.

Available from:
http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/bmps.Par.60203.File.dat/WO1_Air%20Resource_BMP_Slideshow%2005-09-2011.pdf

Additional information about Air Resource BMPs can be found at:

- EPA Natural Gas STAR Program
  http://www.epa.gov/gasstar/tools/recommended.html
- California Air Resources Board's Clearinghouse
  http://www.arb.ca.gov/cc/non-co2-clearinghouse/non-co2-clearinghouse.htm
- Four Corners Air Quality Group
  http://www.nmenv.state.nm.us/aqb/4C/

Wind Energy Development Programmatic EIS

Developed by: Bureau of Land Management

Year developed or last updated: 2010

Available from: FEIS Chapter 2 (section 2.2.3.2) at http://windeis.anl.gov/

Description: As part of the proposed action, BLM developed BMPs for each major step of the wind energy development process, including site monitoring and testing, plan of development preparation, construction, operation, and decommissioning. General BMPs are available for each step, and certain steps also include specific BMPs to address the following resource issues: wildlife and other ecological resources, visual resources, roads, transportation, noise, noxious weeds and pesticides, cultural/historic resources, paleontological resources, hazardous materials and waste management, storm water, human health and safety, monitoring program, air emissions and excavation and blasting activities.

***Note*:** Although the Wind Energy Development Programmatic EIS addressed only the 11 western states and did not include South Dakota, the BMPs, Guidelines and Standard Operating Procedures described in this EIS may be utilized as projects are proposed and implemented.

Montana/Dakota Guidelines for Grazing Management – Dakota's Portion

Developed by: Bureau of Land Management

Year developed or last updated: 1997

Available from: Described in Appendix A

Description: Guidelines for grazing management are preferred or advisable approaches to grazing management practices determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting the standard(s).

Guidelines are provided to maintain or improve resource conditions in upland and riparian habitats available for livestock grazing. In both riparian and upland habitats, these guidelines focus on establishment and maintenance of proper functioning condition and healthy rangelands. The application of these guidelines is dependent on individual management objectives.

Mitigation Guidelines

Developed by: Bureau of Land Management

Year developed or last updated: 2009

Available from: Appendix D, SD RMP

Description: South Dakota Field Office (SDFO) Mitigation Guidelines are a compilation of practices employed by the Bureau of Land Management (BLM) to mitigate impacts from surface disturbance. They apply to activities such as road or pipeline construction, range improvements, and permitted recreation activities. The guidelines are designed to protect resources such as soil, water, air, vegetation, wildlife habitat, and cultural or historic properties. The guidelines are not land use decisions; rather they are examples of mitigation measures that could be applied, as appropriate, based on site-specific National Environmental Policy Act (of 1969) (NEPA) analysis for individual proposals. The guidelines are presented as an appendix of the Resource Management Plan (RMP) for easy reference, as they apply to many resources and derive from many laws. This list included in the appendix is not comprehensive and is intended to be used as a guide for appropriate project planning, design, and implementation within the SDFO. Because mitigation measures change or are modified, based on new information, the guidelines are updated periodically for SDFO.

General practices and guidelines:

- Use avoidance or relocation as the preferred strategy for reducing potential adverse effects.
- Employ as much mitigation as possible during planning.
- Minimize surface disturbance effects of operations and maintain the reclamation potential of the site through design, construction, and other practices/techniques.
- Reduce impacts to soil and water resources. Eliminate sources of ground water and surface water contamination.
- Manage invasive species
- Reduce impacts to air resources.
- Develop and implement a mitigation monitoring and reporting strategy.

- Waterbody crossing guidelines
- Culverts (refer to The Gold Book for installation details)

Note: Specific guidelines and management practices for individual activities are described in Appendix D.

South Dakota Field Office Reclamation Guidelines

Developed by: Bureau of Land Management

Year developed or last updated: 2009

Available from: Appendix C

Description: Reclamation would be required for surface-disturbing activities (BLM surface only) that disturb vegetation and/or mineral/soil resources. The reclamation of a site aims to set the perpetual course for the planned future condition of a site, including eventual ecosystem restoration by natural processes. Prior to a surface-disturbing activity the site would be evaluated on a case-by-case basis, including an on-site assessment, if necessary, and mitigation measures would be enacted where appropriate. Reclamation plans would be site-specific, project-specific, and incorporate the project's complexity, environmental concerns, and reclamation potential. This appendix gives guidance for appropriate reclamation planning prior to authorization and following surface disturbance.

Reclamation objectives include:

- Manage all waste materials
- Ensure subsurface integrity and eliminate sources of ground and surface water contamination.
- Re-establish slope stability, surface stability, and desired topographic diversity.
- Reconstruct and stabilize water courses and drainage features.
- Maintain the biological, chemical, and physical integrity of the soil resource.
- Prepare site for revegetation.
- Establish a desired, self-perpetuating, native plant community.
- Reestablish complementary visual composition.
- Manage invasive species
- Develop and implement a reclamation monitoring and reporting strategy.

Note: Additional details can be found in Appendix C and in the Interagency Burned Area Rehabilitation Guidebook (below).

Interagency Burned Area Rehabilitation Guidebook

Developed by: USDI BLM, NPS, FWS, BIA

Year developed or last updated: 2006

Available from: http://www.fws.gov/fire/ifcc/Esr/Policy/BAR_Guidebook11-06.pdf

The purpose of the Interagency Burned Area Rehabilitation Guidebook (Guidebook) is to provide general operational guidance for the Department of the Interior Burned Area Rehabilitation (BAR) activities after a wildfire. In conjunction with Departmental and agency policy, it is designed to provide agency administrators and BAR specialists with sufficient information to:

- Understand BAR policy, standards, and procedures.
- Assess wildfire damage and develop a cost effective plan or report.
- Assess and report accomplishments.

It consolidates and provides an interagency interpretation of BAR policies, procedures, objectives, and standards where there is Departmental and agency agreement.

Objectives

Based on actions identified in approved land and fire management plans:

- To evaluate actual and potential long-term post-fire impacts to critical cultural and natural resources and identify those areas unlikely to recover naturally from severe wildfire damage.

- To develop and implement cost-effective plans to emulate historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with approved land management plans, or if that is infeasible, then to restore or establish a healthy, stable ecosystem in which native species are well represented.
- To repair or replace minor facilities damaged by wildfire.

Allowable Actions Include:

- Repair or improve lands unlikely to recover naturally from wildfire damage by emulating historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with existing land management plans.
- Chemical, manual, and mechanical removal of invasive species, and planting of native and non-native species, consistent with 620DM3.8F, restore or establish a healthy, stable ecosystem even if this ecosystem cannot fully emulate historical or pre-fire conditions.
- Tree planting to reestablish burned habitat, reestablish native tree species lost in fire, prevent establishment of invasive plants, and regenerating Indian trust commercial timberland as prescribed by a certified silviculturalist to not regenerate for ten years following the fire.
- Repair or replace wildfire damage to minor operating facilities (e.g., campgrounds, interpretive signs and exhibits, shade shelters, fences, wildlife guzzlers, etc.). Rehabilitation may not include the planning or replacement of major infrastructure, such as visitor centers, residential structures, administration offices, work centers and similar facilities. Rehabilitation does not include the construction of new facilities that did not exist before the fire, except for temporary and minor facilities necessary to implement burned area rehabilitation efforts.

Monitoring Guidelines for Soils

Developed by: Bureau of Land Management

Year developed or last updated: 2009

Description: Provides monitoring direction and monitoring criteria for soils. Considers erosion, streambanks, floodplains, riparian areas, soil salinization, sodification, compaction, rutting, productivity, fill material and subsidence. Lists techniques, unit of measures, frequency and duration of monitoring, remedial action triggers, and management option.

Additional details can be found in Appendix N.

South Dakota Non-Point Source (NPS) Management Plan

Developed by: South Dakota Dept. of Environment and Natural Resources

Year developed or last updated: 2007

Available from: Watershed Protection Water Resources Assistance Program, South Dakota Department of Environment and Natural Resources, Joe Foss Building, 523 East Capitol Pierre, South Dakota 57501-3182. Available online at: http://denr.sd.gov/dfta/wp/NPSMgmtPlan07.

Description: Revised South Dakota NPS Pollution Management Program Plan:

Establishes objectives and tasks designed to provide direction for how the South Dakota NPS Program will develop and implement total maximum daily loads (TMDLs) for impaired waterbodies during the next five years.

The plan is the “road map” of how the South Dakota NPS Program will reach the objectives and move toward attaining the goal established.

BMPs cost shared are practices that:

- Prevent pollutants from leaving a specific area;
- Reduce/eliminate the introduction of pollutants,
- Protect sensitive areas; and/or
- Prevent the interaction between precipitation and pollutants.

BMPs approved for use in South Dakota that are applicable to BLM include:

- Practices recognized by the USDA Natural Resource Conservation Service, other federal agencies and the South Dakota Conservation Commission as effective in preventing or controlling NPS pollution from urban and rural sources. Design and construction to NRCS specifications is the standard used for BMP installation;
- Sediment removal.

Forestry Best Management Practices for South Dakota

Developed by: South Dakota Dept. of Agriculture

Year developed or last updated: 2003

Available from: South Dakota Dept. of Agriculture 523 East Capitol Pierre, South Dakota 57501-3182. Summary of practices available on-line in 2004 Field Audit Report, Implementation monitoring and evaluation of SD Forestry Best Management Practices in Appendix A at http://denr.sd.gov/dfta/wp/P2/Documents/04FieldAuditRpt.pdf

Description: Describes management practices to reduce impacts from logging and other harvest practices.

The BMPs address:

- Forest watersheds and non-point source pollution
- Road maintenance and construction
- Timber harvest design
- Streamside management
- Stream crossings
- Winter logging
- Hazardous substances

Selected Practices for Avian Protection on Power Lines

Developed by: Avian Powerline Interaction Committee

Year developed or last updated: 2006

Available from: Avian Powerline Interaction Committee at *www.aplic.org*

Description: Provides practices and guidelines to limit powerline hazards to birds. Provides engineers, biologists, utility planners and the public with a comprehensive resource for eliminating or reducing avian electrocutions and collisions, and highlights management options and cooperative partnerships.

Guidelines for Open Burning

Developed by: State of South Dakota

Year developed or last updated: On-line document in 2010

Available from: http://denr.sd.gov/des/aq/openburn.aspx

Description: Provides guidelines to follow when open burning. Guidelines address visibility and smoke dispersion, hazardous waste issues, notification of other parties.

Integrated Vegetation Management Handbook H-1740-2

Developed by: Bureau of Land Management

Year Developed: 2008

Description: Many of these BMPs are identified as Standard Operating Procedures (SOPs) preventative measure, or mitigation measures in the BLM Vegetation Treatments using herbicides EIS. (USDI, BLM 2007a) or as SOPs in the BLM Vegetation Treatments Programmatic EIS (USDI, BLM 2007c).

Focus Points include:

- The need for proper planning related to timing, spatial extent and duration are critical to minimize environmental impacts.
- The value of consulting with a cross-section of natural resource specialist to inform the decision making process.
- The importance of considering multiple factors such as wildlife or water quality when developing and implementing management activities.
- The necessity of contingency revegetation plans in cases where natural reestablishment of native vegetation may not be feasible due to lack of seed source or impacts from competing non-native or invasive vegetation.
- The need to give special emphasis to the protection of sensitive resources (e.g. listed species habitats, cultural resources etc.).
- The important of developing inventory and monitoring strategies.

The BMPs describes practices to limit impacts of vegetation treatment to:

- Invasive plant species
- Soil resources
- Native plant conservation and revegetation
- Using pesticide and biological controls
- Air quality
- Wildlife habitat
- Cultural and historic resources
- Water quality and wetlands
- Recreation, visual, and wilderness resources

Interagency Standards for Fire and Fire Aviation Operations

Year developed: Updated 2012

Developed by: USDI BLM, NPS, USFWS, and USDA USFS

Publication reference: NFES 2724

This is an interagency publication that provides guidance and policy direction for the federal fire program. Includes standards for firefighting, identifies roles of agencies, clarifies administration process, safety procedures, incident

management, fire suppression, training, equipment, communications, aviation operations/resources, prescribed fire, and reviews and investigations.

Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States

Developed by: Bureau of Land Management

Publication reference: ROD 11-29-2007

Available from: http://www.blm.gov/wo/st/en/prog/more/veg_eis.html

Description: This document outlines the specific decisions, standard operating procedures, and mitigation measures based on the Final Programmatic EIS concerning the use of herbicides in the Bureau of Land Management integrated pest management program.

2008-2012 Invasive Species National Management Plan

Developed by: National Invasive Species Management Council (NISC)

Publication reference: 8-1-2008

Available from: http://www.invasivespecies.gov

Description: Directs federal efforts (including overall strategy and objectives) to prevent, control and minimize invasive species and their impacts for fiscal years 2008 through 2012.

South Dakota Aquatic Nuisance Species (ANS) Management Plan

Developed by: South Dakota Game, Fish and Parks

Publication reference: 12-11-2008

Available from: http://gfp.sd.gov/wildlife/nuisance/aquatic/SDANS-management-plan.aspx

Description: the development of a state ANS management plan, as called for in Section 1204 of the Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA) of 1990, provides an opportunity for federal cost-share support for implementation of the plan. This management plan was developed to address the prevention, control, and effects of aquatic nuisance species that have invaded or may invade South Dakota's waters.

Keep Aquatic Nuisance Species out of South Dakota Waters

Developed by: South Dakota Game, Fish and Parks

Publication reference: 3-15-2010

Available from: http://gfp.sd.gov/wildlife/nuisance/aquatic/default.aspx

Description: Provides practices and guidelines to reduce the threat of the introduction and spread aquatic nuisance species.

Siting Guidelines for Wind Power Projects in South Dakota

Developed by: The South Dakota Bat Working Group in cooperation with the South Dakota Department of Game, Fish and Parks.

Publication Reference: None

Description: Siting guidelines for wind power developers and other stakeholders to utilize as they consider potential wind power sites in South Dakota. These guidelines address issues/concerns associated with the preconstruction, construction or post-construction of wind turbines and have been divided into eleven general categories:

Land Use
Natural and Biological Resources
Noise
Visual Resources
Public Interaction
Soil Erosion and/or Water Quality
Health and Safety
Cultural, Archaeological, and Paleontological Resources
Socioeconomic, Public Services, and Infrastructure
Solid and Hazardous Wastes
Air Quality and Climate

Available from: http://gfp.sd.gov/wildlife/docs/wind-power-siting-guidelines.pdf